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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,179	04/19/2001	Kenneth James Barker	RAL919990168US1	1524

26675 7590 07/12/2005

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EXAMINER

CHANG, ERIC

ART UNIT	PAPER NUMBER
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2116

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/839,179

Applicant(s)

BARKER ET AL.

Examiner

Eric Chang

Art Unit

2116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-2 and 4-20 are pending.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-2 and 4-8 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent 5,805,597 to Edem.

4. As to claim 1, Edem discloses a method of conserving power consumption in a communication system which includes components capable of selectively entering a low power operating mode and an auto-negotiation feature by:

[a] determining eligibility of a system to enter a low power operating mode based on operator generated signals, time of day, or non-use of the system for a period of time, or a combination thereof [col. 8, lines 44-67, and col. 9, lines 1-6];

[b] exchanging messages indicative of a low power operating mode capability [col. 13, lines 18-22];

[c] using an auto-negotiation feature to interpret exchanged signals to verify that connected systems include the low power mode capability [col. 13, lines 21-23]; and

[d] transmitting a signal that a communications session is completed to cause connected systems to enter the low power mode [col. 13, lines 23-25].

Edem teaches a transmitting device on the network uses an auto-negotiation protocol to indicate that it desires to enter a low power mode, and receives a message from the receiving device that it is also capable of entering the low power mode. If the exchange indicates that both devices support a low power mode, the devices will enter a low power mode, substantially as claimed. Furthermore, Edem teaches that the devices in the system would be eligible to enter a low power mode when there was little or no communication traffic, and subsequently negotiate to enter said low power mode [col. 8, line 67, and col. 9, lines 1-6].

5. As to claim 2, Edem discloses the auto-negotiation feature is a next-page facility [col. 12, lines 37-55].

6. As to claim 4, Edem discloses a system utilizing a data communication device having a plurality of data exchange modes, each of said modes operating at different speeds and power consumption levels, protocol means for compatibly coupling said data communication device to another data communication device for exchanging data therebetween, and selection means in said data communication device operating in a high speed mode to switch to a different speed mode that consumes less power during an idle period by:

[a] exchanging data representative of said data communication devices ability [col. 13, lines 18-23] and eligibility [col. 8, line 67, and col. 9, lines 1-6] to operate at the least power consuming speed;

[b] decoding via said protocol means said representative data [col. 13, lines 11-25]; and

Art Unit: 2116

[c] changing to said least power consuming speed in response to another protocol signal [col. 13, lines 23-25].

Edem teaches the method to conserve power, including using auto-negotiation to verify the ability to enter a low power mode, and having the devices enter a low power mode thereafter, substantially as claimed. Furthermore, Edem teaches that the full power mode has a greater bandwidth than the low power mode [col. 19, lines 51-55]. Therefore, Edem teaches that the higher transmission speed consumes more power, substantially as claimed.

7. As to claim 5, Edem discloses a method for conserving power consumption during periods of low usage by using a next-page aspect of the auto-negotiation feature to communicate among terminal data equipment each equipment's capability to assume a low power mode, the method comprising:

[a] detecting periods of low network usage [col. 8, lines 44-67, and col. 9, lines 1-6];

[b] verifying in response to detection of low network usage that each equipment is eligible to assume the low power mode by use of the auto-negotiation feature [col. 13, lines 11-25]; and

[c] asserting signals to put each eligible equipment in a low power mode of operation [col. 13, lines 23-25].

Edem teaches the method to conserve power, including using auto-negotiation to verify the ability to enter a low power mode, and having the devices enter a low power mode thereafter, substantially as claimed. Furthermore, Edem teaches that such an attempt to enter a low power mode occurs when network traffic has decreased to a limited level [FIG. 13, element 211].

8. As to claims 6-8, Edem discloses the means to put the system in low power mode selectively detect [col. 11, lines 40-47] and control [col. 10, lines 19-43, and col. 11, lines 19-39] portions of a physical layer device in said system. Edem teaches that the power mode is selected by detecting the protocol negotiation via the physical layer, and that the power mode controls whether the full-power or low-power portions are used to transmit and receive data.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 9-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,805,597 to Edem, in view of U.S. Patent 6,360,327 to Hobson.

11. As to claims 9-20, Edem teaches the limitations of the claim, including a method of conserving power by using an auto-negotiation feature to determine the capability and eligibility of components to enter a low power mode, but does not teach that the eligibility to enter the low power mode is stored in the system.

Hobson teaches that components may be selectively placed into a low power mode [col. 11, lines 59-63, and col. 12, lines 35-47]. Thus, Hobson teaches a means for conserving power

Art Unit: 2116

similar to that of Edem, including determining if components are eligible to enter a low power mode [col. 2, lines 66-67, and col. 3, lines 1-12]. Hobson further teaches the eligibility of the system to enter the low power mode is stored in a sleep register when a sleep request occurs [col. 10, lines 41-64], by using at least one binary bits [col. 9, lines 18-30]. Furthermore, Hobson teaches that the sleep register is organizationally unique [col. 10, lines 61-64].

At the time that the invention was made, it would have been obvious to a person of ordinary skill in the art to employ the storage of power mode eligibility as taught by Hobson. One of ordinary skill in the art would have been motivated to do so that the components can determine if the system is eligible to enter a low power mode.

It would have been obvious to one of ordinary skill in the art to combine the teachings of the cited references because they are both directed to the problem of conserving power consumption. Moreover, the storage of power mode eligibility means taught by Hobson would improve the flexibility of Edem because it allows for the indication of a plurality of low power modes [col. 2, lines 53-65].

Response to Arguments

12. Applicant's arguments filed April 22, 2005 have been fully considered but they are not persuasive.

13. In the remarks, applicants argued in substance that Edem does not teach or suggest that the system is "capable of determining eligibility of the system to enter a low power mode based on operator generated signals, time of day, or non-use of the system for a period of time, or a

Art Unit: 2116

combination thereof". But Edem teaches that the system determines if it is to enter a low power mode based on a non-use of the system for a period of time [col. 8, lines 44-67], such as when there is no or only a very limited amount of data being exchanged [col. 8, lines 48-52].

Furthermore, Edem teaches that when this condition is met, the system is eligible to enter a low power mode [col. 8, lines 62-67]. Thus, Edem specifically teaches the eligibility criteria for entering a low power is based on a non-use of the system for a period of time, substantially as claimed.

14. In the remarks, applicants argued in substance that Edem does not teach or suggest that components capable of selectively entering a low power operating mode. But Edem teaches that components within the communication system, such as the various endpoints, are capable of selectively entering a low power mode when eligibility criteria are met [col. 8, line 67, and col. 9, lines 1-6]. Edem also teaches that within each endpoint are components that operate for full power communication [80' and 202'] as well as components that operate for low power communication [236 and 252]. Thus, Edem specifically teaches components that are capable of selectively entering a low power mode, substantially as claimed.

15. In the remarks, applicants argued in substance that Edem does not teach or suggest a protocol or exchange of signals for determining eligibility. But Edem teaches exchanging data representative of said data communication devices ability [col. 13, lines 18-23] and eligibility [col. 8, line 67, and col. 9, lines 1-6] to operate at the least power consuming speed.

Furthermore, Edem teaches a protocol comprising an exchange of signals for determining the

Art Unit: 2116

mutual eligibility of the endpoints to enter a low power mode, and causing said endpoints to enter said low power mode if they are both capable of such communication [col. 13, lines 11-25]. Thus, Edem specifically teaches a protocol or exchange of signals for determining eligibility, substantially as claimed.

16. In the remarks, applicants argued in substance that Edem does not teach or suggest that selectively detecting and controlling portions of a physical layer device in said system. But Edem teaches selectively detecting if components in the system should enter a low power mode [col. 11, lines 40-47]. Furthermore, Edem teaches controlling portions of a physical layer device in said system [col. 10, lines 19-43, and col. 11, lines 19-39]. Thus, Edem specifically teaches selectively detecting and controlling portions of a physical layer device in said system, substantially as claimed.

17. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., selectively reducing portions of various devices to low power mode) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

18. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the

Art Unit: 2116

teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Edem teaches a method of conserving power by using an auto-negotiation feature to determine the capability and eligibility of components to enter a low power mode. Hobson teaches that components may be selectively placed into a low power mode [col. 11, lines 59-63, and col. 12, lines 35-47]. Thus, Hobson teaches a means for conserving power similar to that of Edem, including determining if components are eligible to enter a low power mode [col. 2, lines 66-67, and col. 3, lines 1-12]. It would therefore have been obvious to one of ordinary skill in the art to combine the teachings of the cited references because they are both directed to the problem of conserving power consumption.

19. In the remarks, applicants argued in substance that Hobson does not teach or suggest devices in a communication system, but rather systems having peripheral devices. But Hobson teaches the eligibility of the system to enter the low power mode is stored in a sleep register when a sleep request occurs [col. 10, lines 41-64], by using at least one binary bits [col. 9, lines 18-30], wherein the sleep register is organizationally unique [col. 10, lines 61-64].. Because computer systems use peripheral devices to communicate on a communication system, the teachings of Hobson are therefore also applicable to devices in a communication system, substantially as claimed.

Conclusion

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Chang whose telephone number is (571) 272-3671. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2116

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 6, 2005
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